

## REMARKS

Attached is a description of Invar, and from this description, the specification has been changed to add a generic description thereof.

In response to the non-final Office Action dated January 6, 2006, non-elected claims 7-20 have been canceled without prejudice or disclaimer of the underlying subject matter, and claim 2 has been amended.

Claim 2 and the specification have been amended to address minor formal matters. No new matter has been added.

Claims 1-6 are pending.

### **Claim Objections**

Claim 2 was objected to for having alleged informalities. Applicant has amended claim 2 to avoid the alleged deficiency. Accordingly, Applicant respectfully requests that the objection to claim 2 be withdrawn.

### **Rejections Under 35 U.S.C. §102**

Claim 1 was objected under 35 U.S.C. §102 (b) as anticipated by *Duboc, Jr. et al.* (U.S. Patent No. 5,541,473). Applicant respectfully traverses this objection.

In an exemplary embodiment of the instant invention, as shown for example FIG. 2, a cathode plate 100 includes alternating layers of cathode electrodes 120 and 150, and insulation layers 130 and 440, respectively, formed on a rear plate 110, where the cathode electrode 120 is the lowermost layer and the insulation layer 440 is the uppermost layer. A mesh grid 400 is formed on the insulation layer 440. A through hole 130a is formed in the gate insulating layer 130, a gate hole 150a is formed in the gate electrode 150, and an electron emission control hole 420 is formed in the mesh grid 400 and insulating layer 440. An electron emission source 140 is formed on the cathode electrode 120 such that the electron emission source 140 is exposed through the through hole 130a, the gate hole 150a, and the electron beam control hole 420.

An anode plate 200 includes an anode electrode 220 formed on a front plate 210. A fluorescent layer 230 is formed on a portion of the anode electrode 220. A field emission display is formed by combining the cathode plate 100 and the anode

plate 200 such that the cathode plate 100 and the anode plate 200 are spaced apart by spacers 300. Moreover, the anode 230 is positioned such that it receives electrons from the electron emission source 140 through the through hold 130a, the gate hole 150a, and electronic beam control hole 420.

Based on the exemplary embodiment discussed above, claim 1 recites a field emission display that comprises, among other elements, spacers provided between the anode plate and the mesh grid so that the mesh grid can be adhered to the cathode plate due to a negative pressure existing between the anode plate and the cathode plate.

*Duboc, Jr.* discloses display device having an emitter set 202a, 202b and a grid 210 that is formed between a baseplate 201 and a faceplate 220. The grid 210 is adjacent to the baseplate and includes alternating stacked layers of conducting layers 212, 214, 216, and 218 and insulating layers 213, 215, and 217. Addressing holes 210a, 210b are formed in the grid and permit the emitter set 202a, 202b to emit electrons to the faceplate 220. An anode 221 is formed on the faceplate 220. The electrons emitted by the emitter set 202a, 202b pass through the addressing holes 210a, 210b, respectively, and impinge upon phosphor regions 222a, 222b. A spacer 230 is formed between the anode 221 and the cathode such that the spacer 230 contacts the anode 230 and conducting layer 218.

*Duboc, Jr.*, however, fails to teach or suggest at least spacers provided between the anode plate and the mesh grid so that the mesh grid can be adhered to the cathode plate due to a negative pressure existing between the anode plate and the cathode plate, as recited in claim 1. First, the Office Action alleges that grid 210 disclosed by *Duboc, Jr.* is a mesh grid. Applicant disagrees at least because the grid 210 of *Duboc, Jr.* is composed of alternating stacked layers of conducting layers 212, 214, 216, and 218 and insulating layers 213, 215, and 217. *Duboc, Jr.* discloses that these sheets are flexible and easy to work with until hardened in a heating process. See, *Duboc, Jr.*, col. 10, lines 42-43. Second, this composition of rigid hardened layers would likely render the grid 210 unaffected by negative pressure existing between the anode plate and the cathode plate. In other words, a negative pressure existing between the anode plate and the cathode plate, would adhere the mesh grid to the cathode plate. It is far more likely that *Duboc, Jr.*

adheres the grid 210 by an adhering agent or by virtue of the formation process, and not due to a negative pressure between the cathode and anode plates.

Spacers are provided between the anode plate and the mesh grid so that the mesh grid can be adhered to the cathode plate due to a negative pressure existing between the anode plate and the cathode plate. For at least this reason, *Duboc, Jr.* fails to anticipate claim 1.

To properly anticipate a claim, the document must disclose, explicitly or implicitly, each and every feature recited in the claim. See Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). *Duboc, Jr.* fails to disclose, teach, or suggest every element recited in independent claim 1, therefore this claim is not anticipated by *Duboc, Jr.*. Accordingly, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. §102 be withdrawn, and this claim be allowed.

#### **Rejections Under 35 U.S.C. § 103**

Claims 2-6 were rejected under 35 U.S.C. §103(a) as unpatentable over *Duboc, Jr.* Applicant respectfully traverses this rejection. Claims 2-6 depend from claim 1. By virtue of this dependency, Applicant submits that claims 2-6 are allowable for at least the same reasons given above with respect to claim 1. In addition, Applicant submits that claims 2-6 are further distinguished over *Duboc, Jr.* by the additional elements recited therein. Furthermore, Applicant submits that the references *Ragland, Jr.* (U.S. Patent No.4,613,785) and *Doan et al.* (U.S. Patent No. 5,186,670) relied on by the Office Action to allegedly show the use of SiO<sub>2</sub> in an insulation layers and Invar® in a mesh structure, respectively, fail to remedy the deficiencies of *Duboc, Jr.* as it relates to claim 1. Applicant respectfully requests, therefore, that the rejection of claims 2-6 under 35 U.S.C. §103 be withdrawn, and these claims be allowed.

**Conclusion**

Based on at least the foregoing amendments and remarks, Applicant submits that claims 1-6 are allowable, and this application is in condition for allowance. Accordingly, Applicant requests a favorable examination and consideration of the instant application. In the event the instant application can be placed in even better form, Applicant requests that the undersigned attorney be contacted at the number below.

Respectfully submitted,

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